Audit System Schematic

This page updated March 30, 2004

The diagram below details the audit system used by the Quality Assurance Section. In this system, a computerized gas calibrator is used to control the dilution of criteria on non-criteria pollutants from compressed gas cylinders. The gases are diluted with zero air obtained from an API 701 pure air generator. An Environics 9100 gas calibrator is the source of O_3 used for NO_2 and O_3 audits. An API 400 O_3 analyzer is used as a transfer standard to measure the amount of O_3 produced by the calibrator. Pollutant concentrations for other criteria and non-criteria gases (CO, SO_2, NO_2, H_2S, and NMHC) are determined by measuring the amount of CO produced by the calibrator using a TECO 48C CO analyzer. The CO analyzer is calibrated at two known ambient level concentrations, plus zero, and is used to trace the amount of CO present in the diluted sample. The amount of CO measured in the diluted sample is used to determine the actual dilution ratio. The derived dilution ration is used to calculate the true concentrations of the other gases present in the compressed gas cylinder at all audit levels.